EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Robert Newman (Reg. no. 60,718) on 1/19/10.

The application has been amended as follows:

1. A method for profiling executions of a plurality of computer programs in a computer

processing system having a processor <u>for executing the plurality of computer programs,</u>

<u>the processor including a profile matrix controller</u>, a memory hierarchy for aiding in

execution of the programs, and a profile matrix <u>that is operatively coupled to the</u>

<u>processor via the profile matrix, and</u> that is separate and independent from the memory

hierarchy for aiding in the profiling of the computer programs <u>and the processor</u>, the

method comprising the steps of:

executing, by the processor, each of the computer programs to generate an

event identifier (EID) for each program, the EID comprising an index and a tag of a

profiled event of the computer program;

sending the EIDs from the CPU to the profile matrix;

accessing, for each EID, an element of the profile matrix using the index and

comparing a part of the element with the tag to determine whether a profile count exists

for the profiled event;

updating, for each EID, the profile count if it[[s]] exists or creating a new profile

count in the profile matrix for the profiled event otherwise; and

optimizing the computer program, based upon the profile counts.

40. A method for profiling execution of a plurality of computer programs in a computer

processing system having a processor for executing the plurality of computer programs,

the processor including a profile matrix controller, a memory hierarchy and a profile

matrix that is operatively coupled to the processor via the profile matrix, and that is

separate and independent from the memory hierarchy and the processor, the method

comprising the steps of:

executing, by the processor, the computer programs to generate an event

identifier (EID) for each program, the EID comprising an index to access an element of

the profile matrix and a tag to determine whether the element corresponds to a profile

count of the profile matrix;

storing, in the profile matrix, a plurality of event-specific profile counts using the

EIDs, each count associated with a profiled event associated with an execution path of

the corresponding computer program;

selecting at least one of the plurality of event-specific profile counts for profiling

the path of one of the computer programs; and

if at least one of the selected event-specific profile counts has exceeded a

predefined threshold, optimizing the portions of the computer program associated with

the event-specific profile counts.

All other pending claims remain unchanged.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The closest prior art (US 6,622,300 to Krishnaswamy et al.; US 5,590,354 to

Klapproth et al.) discloses or suggests: profiling executions of a plurality of computer

programs in a computer processing system having a processor, a memory hierarchy for

aiding in execution of the computer programs and a profile matrix comprising the steps

of: executing, by the processor each of the computer programs to generate an event

identifier (EID) for each program sending the EIDs from the CPU to the Profile matrix;

accessing, for each EID, an element of the profile matrix; updating, for each EID, the

profile count if its exists or creating a new profile count in the profile matrix for the

profiled event otherwise; and optimizing the computer program, based upon the profile

counts.

The closest prior art does not teach or suggest a processor or CPU including a

profile matrix controller, a profile matrix that is operatively coupled to the processor via

the profile matrix, and that is separate and independent from the memory hierarchy for

aiding in the profiling of the computer programs and the processor or CPU, and

accessing, for each EID, an element of the profile matrix using the index and comparing

a part of the element with the tag to determine whether a profile count exists for the

profiled event.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JASON MITCHELL whose telephone number is

(571)272-3728. The examiner can normally be reached on Monday-Thursday and

alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bullock Lewis can be reached on (571) 272-3759. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/
Primary Examiner, Art Unit 2193